

Title: **Climate Change and Fishery Governance in the Pacific Northwest US: the Case of Columbia River Basin Salmon**

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Abstract: This paper addresses the impacts of climate change on salmon fishery governance in the Columbia River Basin of the Pacific Northwest U.S. Here the physical and ecological effects of climate change are expected to be significant and to include alterations in freshwater and marine aquatic habitat that will affect the growth, productivity, survival, and migration of salmon. To accommodate these changes, governance must be redesigned to adapt to wider-scale variability and uncertainty. The paper describes the seven species of Pacific salmon that live in the Columbia River Basin and the fisheries they support. It outlines the complex temporal and spatial system of governance for ocean and in-river fisheries. Attributes of the existing governance system are compared and contrasted to needed governance attributes. A new climate regime will require that governance be broader in scope, encompass both offshore and onshore effects, and include both fishery and non-fishery actions. It will need to function on limited information, adapt to unforeseen conditions and provide maximum flexibility for managers and user groups. As such, the redesign of governance for conditions of climate change will move fishery governance toward an operational implementation of ecosystem-based fishery management. The paper concludes with suggestions of how to begin the process of governance redesign, addressing both the legacy of history and the horizon of change. Principles of governance redesign may generalize beyond Pacific salmon to other fisheries facing the effects of climate change.